



## Differentiating infection in vaccinated animals

### Work Package 4.3 DIVA diagnostics

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## Differentiating infection in vaccinated animals

### Work Package 4.3 DIVA diagnostics

#### TASKS:

1. **Validation of DIVA diagnostics** ✓
2. **Development of confirmatory tests** ✓
3. **Implementation of DIVA diagnostics for existing vaccines** ✓
4. **Build networks to improve DIVA diagnostics** ✓



#### Serologic DIVA diagnostics:

##### BTV DIVA diagnostics:

- The first results obtained indicate that **BTV-inactivated vaccines** used in the field are not free of NS 2 and 3 proteins. A better purification of these vaccines is necessary to develop this kind of DIVA strategy.
- NS1 antibodies are not detected in vaccinated animals.

##### CSFV DIVA diagnostics:

- For the evaluation of **CSFV Antibody ELISAs** seven commercially available test kits from seven providers were tested in five CSF reference laboratories.
- New **expression systems** are being tried for production of antigens for serological tests.
- New detection systems for **multiplex assays** are analysed.
- New **chimeric pestivirus vaccines** are currently validated.

##### FMDV DIVA diagnostics:

- Existing ELISA for the detection of antibodies to **FMDV NSP test** (3ABC-trapping ELISA) has been optimized. This work led to the availability of a ready-to-use, stable kit, then usable also in poorly equipped laboratories.
- Confirmatory tests based on IgA in saliva are developed.

##### HPAI DIVA diagnostics:

- An inter-laboratory evaluation of a **commercial DIVA kit** was performed. There was good specificity and fair sensitivity when tested by 8 EPIZONE partners.



#### Genetic CSFV DIVA diagnostics:

Animals vaccinated with live vaccines may become viremic. Several real-time RT-PCR methods have been published for differentiation of C-strains from Classical swine fever virus wild-types.

#### How was dissemination?

**Three workshops on FMD NSP for stakeholders and authorities during 2007**

**Joint international publications on DIVA diagnostics and a review on DIVA diagnostics**

**National publications and presentations on DIVA diagnostics has improved awareness**

**National and EU funding for DIVA vaccines and diagnostics has been achieved**



**DIVA vaccines and diagnostics will improve the vaccinate-to-live strategy for domestic livestock as well as free ranging animals.**

**Safe trade of healthy, vaccinated animals.**

